

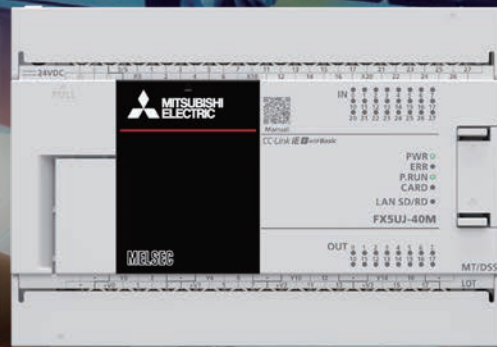
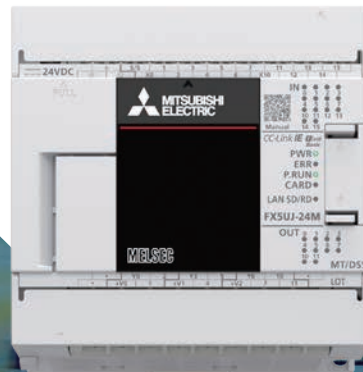
FACTORY AUTOMATION

MELSEC iQ-F Series iQ Platform-compatible PLC

FX5UJ-24M□/D□, FX5UJ-40M□/D□, FX5UJ-60M□/D□,
FX5-ENET

Start any control from here

FX5UJ



**FX5-ENET
with improved
functions!**

The FX5UJ CPU modules with new DC power supply type launched!



▶ DC power supply type **NEW**

FX5UJ-24MR/DS	DC	D2	R	FX5UJ-40MR/DS	DC	D2	R	FX5UJ-60MR/DS	DC	D2	R
FX5UJ-24MT/DS	DC	D2	T1	FX5UJ-40MT/DS	DC	D2	T1	FX5UJ-60MT/DS	DC	D2	T1
FX5UJ-24MT/DSS	DC	D2	T2	FX5UJ-40MT/DSS	DC	D2	T2	FX5UJ-60MT/DSS	DC	D2	T2

DC DC power supply D2 DC input (sink/source) R Relay output T1 Transistor output (sink) T2 Transistor output (source)

Recommended as a cost-effective alternative to FX3G with high cost-performance.

Program capacity
48 k steps

Comments, labels, etc. are allocated separately, ensuring sufficient memory capacity.

Control scale
256 points

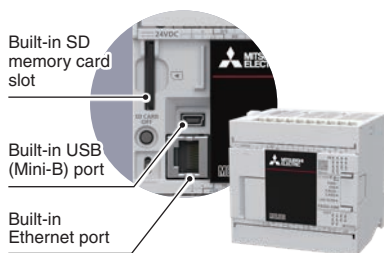
- (1) Up to 256 input/output points
- (2) Up to 256 remote input/output points
- Up to 256 total points ((1) + (2))

Instruction execution speed
34 ns

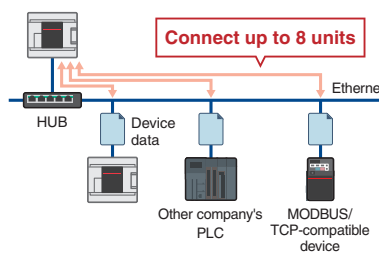
Realize faster instruction execution speeds.

Equipped with abundant built-in ports to accommodate various applications.

Built-in Ethernet port supports with **CC-Link IE Field Basic**

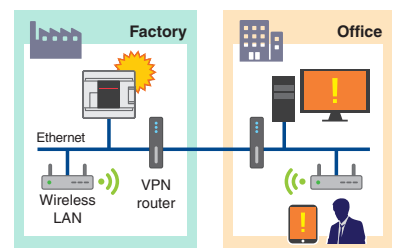


Simple CPU communication function



Easily send and receive device data with just parameter settings.

Web server function



Check equipment operation statuses remotely from a smartphone or tablet.

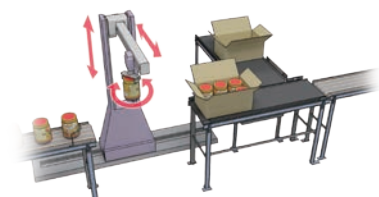
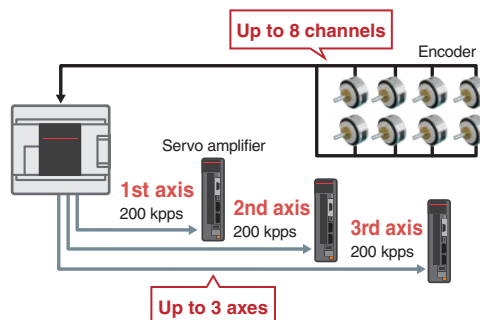
The built-in functions of the CPU module make it possible to build a system at low cost.

Built-in high-speed counter function

Built-in high-speed counter functions for 8 channels of high-speed pulse input (100 kHz: 4 ch + 10 kHz: 4 ch)

Built-in positioning function

- Output pulse trains of 200 kpps (transistor output)
- Support for up to 3 positioning axes



Improved functions



Expanded functions of FX5-ENET!

Firmware version 1.200 or later*1 Serial number: 234*** or later

The firmware upgrade brings an encrypted communication function for connecting to the cloud and free email services.

MQTT communication function

Email notification function



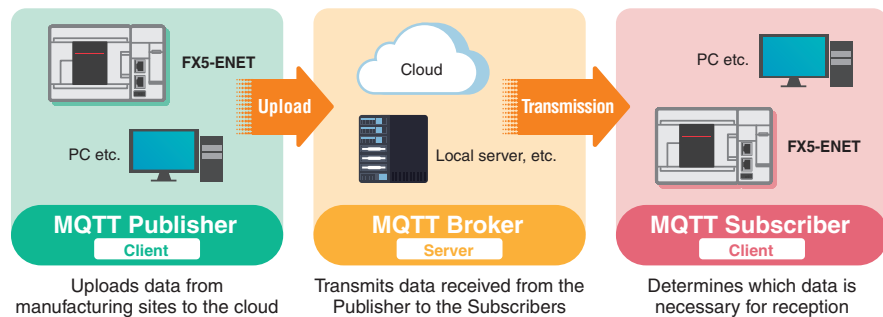
MQTT communication function

It is a function to send sensor input information collected by the programmable controller to the MQTT broker, and also to subscribe to information from the MQTT broker.

What is MQTT

MQTT is a lightweight and simple communication protocol optimized for use with IoT devices and used mainly for cloud connectivity. It includes security features such as retransmission if a message is not received, TLS encryption, and client authentication.

The MQTT protocol adopts the Publish-Subscribe model. When an FX5-ENET device submits a Publish request to an MQTT broker, the MQTT broker transmits the information to all Subscribe request reception devices.

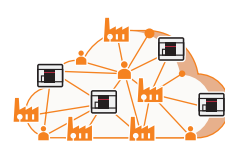


Point

Also support cloud connectivity, which is in high demand in fields other than factory automation.



Collaboration between PLCs across a wide area and batch management of PLCs has become possible.



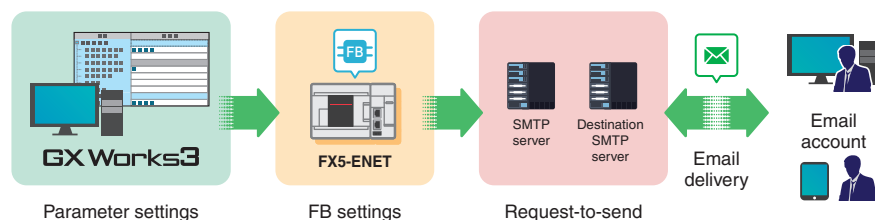
Please refer to the leaflet above for details. L(NA)06880ENG



Email notification function

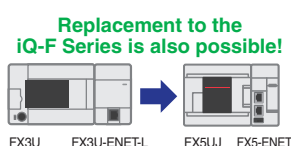
Function for sending email to remote computers, smartphones, and other devices via an email server.

Using engineering software*2 makes it easy to configure various parameters. Setting the recipient and transmission data in FB and requesting to send, the email will be sent via the SMTP server.



Point

Replacement from FX3U-ENET-L is possible.



Support for encrypted communication allows for connection to free email servers.



*1: Firmware update from the existing version to Ver. 1.2** is not possible.

*2: GX Works3, Certificate Configuration Tool for FX5-ENET

MELSEC iQ-F Series

iQ Platform-compatible PLC

FX5UJ CPU Module (DC power supply type)

■ Generic specifications (For details, refer to the manual.)

Item	Specifications
Operating ambient temperature*	0 to 55°C, non-freezing
Storage ambient temperature	-25 to 75°C, non-freezing
Operating ambient humidity	5 to 95%RH, non-condensation*
Storage ambient humidity	5 to 95%RH, non-condensation

*1: There is a derating of input and output. Please refer to the user manual for details.

*2: When used in a low-temperature environment, use in an environment with no sudden temperature changes. If there are sudden temperature changes because of opening/closing of the control panel or other reasons, condensation may occur, which may cause a fire, fault, or malfunction. Furthermore, use an air conditioner in dehumidifier mode to prevent condensation.

■ Power supply specifications

Item	Specifications		
	FX5UJ-24M□	FX5UJ-40M□	FX5UJ-60M□
Rated voltage	24 V DC		
Voltage fluctuation range	-30%, +20%		
Frequency rating	-		
Allowable instantaneous power failure time	Operation can be continued upon occurrence of instantaneous power failure for 5 ms or less.		
Power fuse	250 V, 5 A Time-lag fuse		
Rush current	33 A max 6.8 ms or less/24 V DC		
Power consumption*	34 W	35 W	36 W
24 V DC built-in power supply capacity	460 mA	500 mA	550 mA

*: The value when all the power supplies are used in the maximum configuration connectable to the CPU module.

■ 24 V DC input (sink/source) (For the output circuit configuration, refer to the manual.)

Item	Specifications
No. of input points	FX5UJ-24M□: 14 points, FX5UJ-40M□: 24 points, FX5UJ-60M□: 36 points
Input impedance	[X0 to X7] 4.3 kΩ [X10 and subsequent] 5.6 kΩ
Input signal voltage	24 V DC +20%, -15%
Input signal current	[X0 to X7] 5.3 mA/24 V DC [X10 and subsequent] 4.0 mA/24 V DC
ON input sensitivity current	[X0 to X7] 3.5 mA or more [X10 and subsequent] 3.0 mA or more
OFF input sensitivity current	1.5 mA or less
Input response time	For details, refer to the manual.
Input signal format (Input sensor form)	No-voltage contact input Sink: NPN open collector transistor Source: PNP open collector transistor
Indication of input operation	LED is lit when input is ON.

■ Relay output (For the output circuit configuration, refer to the manual.)

Item	Specifications
No. of output points	FX5UJ-24MR/DS: 10 points, FX5UJ-40MR/DS: 16 points, FX5UJ-60MR/DS: 24 points
External power supply	30 V DC or less 240 V AC or less (250 V AC or less when the module does not comply with CE, UL, or cUL standards)
Max. load	2 A/point The total load current of resistance loads per common terminal should be the following value. • 3 output points/common terminal: 6 A or less* • 4 output points/common terminal: 8 A or less*
Min. load	5 V DC, 2 mA (reference values)
Open circuit leakage current	-
Response time	OFF→ON: Approx. 10 ms ON→OFF: Approx. 10 ms
Indication of output operation	LED is lit when output is ON.

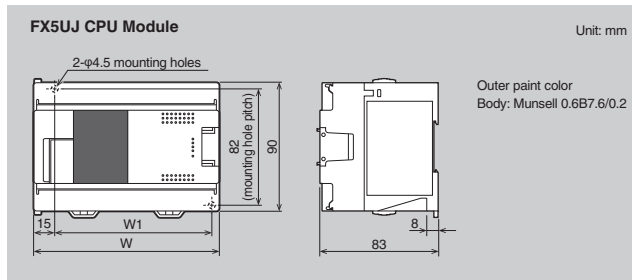
*: For details on the common, refer to the manual.

■ Transistor output (For the output circuit configuration, refer to the manual.)

Item	Specifications
No. of output points	FX5UJ-24MT/□: 10 points, FX5UJ-40MT/□: 16 points, FX5UJ-60MT/□: 24 points
Output type	FX5UJ-□MT/DS: Transistor/sink output FX5UJ-□MT/DSS: Transistor/source output
External power supply	5 to 30 V DC
Max. load	0.5 A/point The total load current of resistance loads per common terminal should be the following value. • 3 output points/common terminal: 0.6 A or less* • 4 output points/common terminal: 0.8 A or less*
Open circuit leakage current	0.1 mA or less/30 V DC
Voltage drop when ON	[Y0 to Y2] 1.0 V or less [Y3 and subsequent] 1.5 V or less
Response time	[Y0 to Y2] 2.5 ms or less/10 mA or more (5 to 24 V DC) [Y3 and subsequent] 0.2 ms or less/200 mA or more (24 V DC)
Indication of output operation	LED is lit when output is ON.

*: For details on the common, refer to the manual.

■ External dimensions



Item	W	W1 (mounting hole pitch)	Mass (weight)
FX5UJ-24M□	95 mm	76 mm	Approx. 0.55 kg
FX5UJ-40M□	130 mm	111 mm	Approx. 0.65 kg
FX5UJ-60M□	175 mm	156 mm	Approx. 0.80 kg

FX5-ENET

■ Performance specifications

(For performance specifications other than the following, refer to the Manual.)

Item	Specifications
Protocol type	CC-Link IE Field Network Basic
	MELSOFT connection*
	SLMP server (3E/1E frames)**
	Socket communication
	Simple CPU communication*
	BACnet/IP**
Number of ports	2**
	Number of occupied I/O points
Number of connectable units	1 module

*1: When each protocol is used, the version applicable to each of the CPU module, FX5-ENET and software is necessary. For details, refer to MELSEC iQ-F FX5-ENET User's Manual.

*2: Since the IP address is shared by two ports, only one address can be set.

■ Product list

Item	Rated voltage	specifications							
		Input specifications		Output specifications					
		No. of input points	Input type	No. of output points	Output type				
FX5UJ-24MR/DS	24 V DC	14	24 V DC sink/source	10	Relay				
FX5UJ-24MT/DS					Transistor/sink				
FX5UJ-24MT/DSS					Transistor/source				
FX5UJ-40MR/DS					24	16	Relay		
FX5UJ-40MT/DS							Transistor/sink		
FX5UJ-40MT/DSS							Transistor/source		
FX5UJ-60MR/DS		36		24			Relay		
FX5UJ-60MT/DS							Transistor/sink		
FX5UJ-60MT/DSS							Transistor/source		
FX5UJ-60MT/DSS					Transistor/source				
FX5-ENET					Ethernet module				
FX5U-U-HW-E					MELSEC iQ-F FX5S/FX5UJ/FX5U/FX5UC User's Manual (Hardware) MODEL CODE: 09R584				
FX5-U-OU-E	MELSEC iQ-F FX5 User's Manual (Application) MODEL CODE: 09R537								
FX5-U-ENET-E	MELSEC iQ-F FX5-ENET User's Manual MODEL CODE: 09R736								

⚠ Safety Warning

- To ensure proper use of the products in this document, please be sure to read the instruction manual prior to use.

Registration

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- In some cases, trademark symbols such as "™" or "®" are not specified in this document.

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